

**IN THE UNITED STATES DISTRICT COURT  
FOR THE DISTRICT OF DELAWARE**

WIRTGEN AMERICA, INC.,	)
	)
Plaintiff,	) C.A. No. 17-770-RGA-MPT
	)
v.	) <b>JURY TRIAL DEMANDED</b>
	)
CATERPILLAR INC.,	)
	)
Defendants.	)

**DEFENDANT CATERPILLAR INC.’S ANSWER TO AMENDED COMPLAINT  
AND COUNTERCLAIMS**

Defendant Caterpillar Inc. (“Caterpillar”) hereby responds to the Amended Complaint for patent infringement (D.I. 33) of Plaintiff Wirtgen America, Inc. (“Wirtgen America”) as follows. To the extent not specifically admitted in the following paragraphs, the allegations in Wirtgen America’s Amended Complaint are denied.

**THE PARTIES<sup>1</sup>**

1. Caterpillar lacks sufficient knowledge and information to admit or deny the allegations of paragraph 1 and therefore denies them.
2. Caterpillar admits that it is a Delaware corporation with its principal place of business at 510 Lake Cook Road, Suite 100, Deerfield, Illinois 60015.
3. Caterpillar admits that it is the parent company of Caterpillar Prodotti Stradali S.r.l. and Caterpillar Paving Products Inc.

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<sup>1</sup> Caterpillar has incorporated the headings that appear in the Amended Complaint. Caterpillar does not necessarily agree with the characterization of such headings and does not waive any right to object to those characterizations. Accordingly, to the extent that a particular heading can be construed as an allegation, Caterpillar specifically denies any such allegations.

## **JURISDICTION AND VENUE**

4. Caterpillar admits that Wirtgen America purports to bring an action for alleged patent infringement under the patent laws of the United States, 35 U.S.C. § 1 *et seq.*, and further admits that this Court has subject matter jurisdiction over actions arising under the patent laws of the United States pursuant to 28 U.S.C. §§ 1331 and 1338(a). Caterpillar lacks sufficient knowledge and information to admit or deny the remaining allegations of paragraph 4 and therefore denies them.

5. Caterpillar admits that it is a Delaware corporation and does not contest that this Court has personal jurisdiction over it for the purpose of this action. Caterpillar also does not contest that venue is proper in this District for the purpose of this action.

## **FACTS**

### **Overview**

6. Caterpillar admits that a document titled *Wirtgen America Contribution and Impact Analysis* is attached to the original Complaint (D.I. 1) as Exhibit 1. Caterpillar lacks sufficient knowledge and information to admit or deny the remaining allegations of paragraph 6 and therefore denies them.

7. Caterpillar lacks sufficient knowledge and information to admit or deny the allegations of paragraph 7 and therefore denies them.

8. Caterpillar lacks sufficient knowledge and information to admit or deny the allegations of paragraph 8 and therefore denies them.

9. Caterpillar lacks sufficient knowledge and information to admit or deny the allegations of paragraph 9 and therefore denies them.

10. Caterpillar denies the allegations of paragraph 10.

11. Caterpillar denies the allegations of paragraph 11.
12. Caterpillar admits that it has imported certain milling machines. Except as so admitted, Caterpillar denies the remaining allegations of paragraph 12.
13. Caterpillar admits that it has imported certain milling machines. Except as so admitted, Caterpillar denies the remaining allegations of paragraph 13.

**Wirtgen America's Patents**

14. Caterpillar admits that Wirtgen America purports to assert against Caterpillar the patents set forth in the chart in paragraph 14. Except as so admitted, Caterpillar denies the remaining allegations of paragraph 14.
15. Caterpillar lacks sufficient knowledge and information to admit or deny the allegations of paragraph 15 and therefore denies them.
16. Caterpillar admits that the title of U.S. Patent No. 7,828,309 (the "309 patent") is "Road-building machine." Caterpillar admits that a copy of the '309 patent was previously filed as Exhibit 2 to Wirtgen America's original Complaint (D.I. 1). Caterpillar lacks sufficient knowledge and information to admit or deny the remaining allegations of paragraph 16 and therefore denies them.
17. Caterpillar lacks sufficient knowledge and information to admit or deny the allegations of paragraph 17 and therefore denies them.
18. Caterpillar admits that the title of U.S. Patent No. 8,118,316 (the "316 patent") is "Operational methods for a road-building machine." Caterpillar admits that a copy of the '316 patent was previously filed as Exhibit 3 to Wirtgen America's original Complaint (D.I. 1). Caterpillar lacks sufficient knowledge and information to admit or deny the remaining allegations of paragraph 18 and therefore denies them.

19. Caterpillar admits that the title of U.S. Patent No. 7,530,641 (the “‘641 patent”) is “Automotive construction machine, as well as method for working ground surfaces.” Caterpillar admits that a copy of the ’641 patent was previously filed as Exhibit 4 to Wirtgen America’s original Complaint (D.I. 1).<sup>2</sup> Caterpillar lacks sufficient knowledge and information to admit or deny the remaining allegations of paragraph 19 of the Amended Complaint and therefore denies them.

20. Caterpillar lacks sufficient knowledge and information to admit or deny the allegations of paragraph 20 and therefore denies them.

21. Caterpillar admits that the title of U.S. Patent No. 8,113,592 (the “‘592 patent”) is “Automotive construction engine and lifting column for a construction engine.” Caterpillar admits that a copy of the ’592 patent was previously filed as Exhibit 5 to Wirtgen America’s original Complaint (D.I. 1). Caterpillar lacks sufficient knowledge and information to admit or deny the remaining allegations of paragraph 21 and therefore denies them.

22. Caterpillar lacks sufficient knowledge and information to admit or deny the allegations of paragraph 22 and therefore denies them.

23. Caterpillar admits that the title of U.S. Patent No. 9,010,871 (the “‘871 patent”) is “Automotive construction machine, as well as lifting column for a construction machine.” Caterpillar admits that the ’871 patent was previously filed as Exhibit 6 to Wirtgen America’s original Complaint (D.I. 1). Caterpillar lacks sufficient knowledge and information to admit or deny the remaining allegations of paragraph 23 and therefore denies them.

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<sup>2</sup> Because the ’641 patent remains stayed, Caterpillar has no obligation to respond to Wirtgen America’s allegations as to this patent. Caterpillar reserves the right to further respond to the ’641 patent to the extent the stay is lifted.

24. Caterpillar admits that the title of U.S. Patent No. 9,656,530 (the “‘530 patent”) is “Automotive construction machine, as well as lifting column for a construction machine.” Caterpillar admits that a copy of the ’530 patent was previously filed as Exhibit 7 to Wirtgen America’s original Complaint (D.I. 1). Caterpillar lacks sufficient knowledge and information to admit or deny the remaining allegations of paragraph 24 and therefore denies them.

25. Caterpillar admits that the title of U.S. Patent No. 7,946,788 (the “‘788 patent”) is “Road construction machine, leveling device, as well as method for controlling the milling depth or milling slope in a road construction machine.” Caterpillar admits that a copy of the ’788 patent was previously filed as Exhibit 8 to Wirtgen America’s original Complaint (D.I. 1). Caterpillar lacks sufficient knowledge and information to admit or deny the remaining allegations of paragraph 25 and therefore denies them.

26. Caterpillar lacks sufficient knowledge and information to admit or deny the allegations of paragraph 26 and therefore denies them.

27. Caterpillar admits that the title of U.S. Patent No. 8,511,932 (the “‘932 patent”) is “Road construction machine, leveling device, as well as method for controlling the milling depth or milling slope in a road construction machine.” Caterpillar admits that a copy of the ’932 patent was previously filed as Exhibit 10 to Wirtgen America’s original Complaint (D.I. 1). Caterpillar lacks sufficient knowledge and information to admit or deny the remaining allegations of paragraph 27 and therefore denies them.

28. Caterpillar admits that the title of U.S. Patent No. 8,690,474 (the “‘474 patent”) is “Road construction machine, leveling device, as well as method for controlling the milling depth or milling slope in a road construction machine.” Caterpillar admits that a copy of the ’474 patent was previously filed as Exhibit 11 to Wirtgen America’s original Complaint (D.I. 1). Caterpillar

lacks sufficient knowledge and information to admit or deny the remaining allegations of paragraph 28 and therefore denies them.

29. Caterpillar admits that the title of U.S. Patent No. RE48,268 (the “‘268 patent”) is “Construction machine, in particular road milling machine, recycler or stabilizer, as well as drive train for construction machines of this type.” Caterpillar admits that the ‘268 patent is attached to the Amended Complaint as Exhibit 27. Caterpillar lacks sufficient knowledge and information to admit or deny the remaining allegations of paragraph 29 and therefore denies them.

30. Caterpillar lacks sufficient knowledge and information to admit or deny the allegations of paragraph 30 and therefore denies them.

31. Caterpillar admits that the title of U.S. Patent No. 8,424,972 (the “‘972 patent”) is “Road milling machine and method for positioning the machine frame parallel to the ground.” Caterpillar admits that a copy of the ‘972 patent is attached to the Amended Complaint as Exhibit 28. Caterpillar lacks sufficient knowledge and information to admit or deny the remaining allegations of paragraph 31 and therefore denies them.

32. Caterpillar lacks sufficient knowledge and information to admit or deny the allegations of paragraph 32 and therefore denies them.

33. Caterpillar admits that the title of U.S. Patent No. 9,879,390 (the “‘390 patent”) is “Road milling machine and method for measuring the milling depth.” Caterpillar admits that a copy of the ‘390 patent is attached to the Amended Complaint as Exhibit 29. Caterpillar lacks sufficient knowledge and information to admit or deny the remaining allegations of paragraph 33 and therefore denies them.

34. Caterpillar lacks sufficient knowledge and information to admit or deny the allegations of paragraph 34 and therefore denies them.

35. Caterpillar admits that the title of U.S. Patent No. 9,879,391 (the “‘391 patent”) is “Road milling machine and method for measuring the milling depth.” Caterpillar admits that a copy of the ’391 patent is attached to the Amended Complaint as Exhibit 30. Caterpillar lacks sufficient knowledge and information to admit or deny the remaining allegations of paragraph 35 and therefore denies them.

**Caterpillar’s Infringing Products**

36. Caterpillar admits that it has imported certain milling machines. Except as so admitted, Caterpillar denies the remaining allegations of paragraph 36.

37. Caterpillar lacks sufficient knowledge and information to admit or deny the allegations of paragraph 37, as they pertain to unidentified records of U.S. Customs. Caterpillar denies the paragraph’s allegations on at least this basis.

38. Caterpillar lacks sufficient knowledge and information to admit or deny the allegations of paragraph 38, as they pertain to unidentified records of U.S. Customs. Caterpillar denies the paragraph’s allegations on at least this basis.

39. Caterpillar admits that it has imported certain milling machines. Except as so admitted, Caterpillar denies the remaining allegations of paragraph 39.

40. Caterpillar admits that Caterpillar Prodotti Stradali S.r.l. manufactures certain milling machines and is located in Minerbio, Italy. Except as so admitted, Caterpillar denies the remaining allegations of paragraph 40.

41. Caterpillar admits that it has imported certain milling machines. Except as so admitted, Caterpillar denies the remaining allegations of Paragraph 41.

42. Caterpillar admits that it has imported certain milling machines. Except as so admitted, Caterpillar denies the remaining allegations of Paragraph 42, as they pertain to unidentified records of U.S. Customs.

43. Caterpillar admits that it has imported certain milling machines. Except as so admitted, Caterpillar denies the remaining allegations of Paragraph 43, as they pertain to unidentified records of U.S. Customs.

44. Caterpillar denies the allegations of Paragraph 44.

45. Caterpillar denies the allegations of Paragraph 45.

46. Caterpillar admits that it has imported certain milling machines. Except as so admitted, Caterpillar denies the remaining allegations of paragraph 46.

47. Caterpillar admits that it has entered into agreements with dealers across the country. Caterpillar lacks sufficient knowledge and information to admit or deny the remaining allegations of paragraph 47 and therefore denies them.

48. Caterpillar denies the allegations of paragraph 48.

49. Caterpillar denies the allegations of paragraph 49.

50. Caterpillar admits that it owns U.S. Trademark Registration No. 4,804,266. Caterpillar admits that it owns U.S. Trademark Registration No. 3,750,812. Caterpillar admits that it owns U.S. Trademark Registration No. 2,448,848. Caterpillar admits that it has owned U.S. Trademark Registration No. 4,676,117. Except as so admitted, Caterpillar denies the remaining allegations of paragraph 50.

51. Caterpillar denies the allegations of paragraph 51.

52. Caterpillar denies the allegations of paragraph 52.

**The Section 337 Investigation at the International Trade Commission**

53. Admitted.

54. Admitted.

55. Admitted.

56. Caterpillar lacks sufficient knowledge and information to admit or deny the allegations of paragraph 56 and therefore denies them.

57. Admitted.

58. Admitted.

59. Caterpillar admits that during the 1067 Investigation, it asserted non-infringement of U.S. Patent Nos. 7,828,309, 9,624,628, and 9,644,340. Caterpillar disagrees with the characterization of the proceedings and therefore Caterpillar denies the remaining allegations of paragraph 59.

60. The Final Initial Determination (“FID”) attached as Exhibit 32 speaks for itself. Caterpillar disagrees with the characterization of the proceedings and the FID and therefore denies the allegations of paragraph 60.

61. Admitted.

62. The ITC’s orders attached as Exhibits 33-36 speak for themselves. Caterpillar denies the remaining allegations of paragraph 62.

63. Caterpillar admits that the parties appealed certain findings of the ITC Final Determination in the 1067 Investigation to the Federal Circuit. Except as so admitted, Caterpillar denies the remaining allegations of paragraph 63.

64. Caterpillar admits that on March 15, 2021, the Federal Circuit issued its opinion in the consolidated appeals captioned *Caterpillar Prodotti Stradali S.r.l. et al. v. Int’l Trade Comm’n*

*et al.*, No. 2019-2445, and *Wirtgen America, Inc. v. Int'l Trade Comm'n et al.*, No. 2019-1911. The opinion speaks for itself. Caterpillar does not agree with the characterization of those proceedings and denies the remaining allegations of paragraph 64.

65. Caterpillar admits that the ITC issued a Final Determination in the 1067 Investigation. The ITC's orders speak for themselves. Except as so admitted, Caterpillar denies the remaining allegations of paragraph 65.

**The Inter Partes Review Proceedings at the Patent Trial and Appeal Board**

66. Admitted.

67. Admitted.

68. Caterpillar admits that, on July 11, 2019, the PTAB entered a revised final written decision determining that Caterpillar had established that claims 1-3, 5-9, 11-16, 21-24, 26-28, and 33-36 of the '309 patent were unpatentable and that Caterpillar had not established that claims 10, 17-20, and 29-32 of the '309 patent were unpatentable in view of the prior art presented. Except as so admitted, Caterpillar denies the remaining allegations of paragraph 68.

69. Admitted.

70. Admitted.

71. Admitted.

72. Admitted.

73. Admitted.

74. Admitted.

75. Admitted.

76. Caterpillar denies the allegations of paragraph 76.

**Caterpillar Began Domestic Manufacturing During the Pendency of this Action**

77. Caterpillar denies the allegations of Paragraph 77.

78. Caterpillar admits that what purports to be a copy of a July 6, 2018, article from the *Arkansas Democrat Gazette* is attached to Wirtgen America's Amended Complaint as Exhibit 37. This July 6, 2018 article speaks for itself. Except as so admitted, Caterpillar denies the remaining allegations of paragraph 78.

79. Caterpillar admits what purports to be copies of pages from Caterpillar's website is attached to Wirtgen America's Amended Complaint as Exhibit 38. Except as so admitted, Caterpillar denies the remaining allegations of paragraph 79.

80. Caterpillar admits what purport to be copies of posts from a "We Are Caterpillar North Little Rock" Facebook group are attached to Wirtgen America's Amended Complaint as Exhibit 39. Except as so admitted, Caterpillar denies the remaining allegations of paragraph 80.

81. Caterpillar admits what purport to be copies of LinkedIn profiles are attached to Wirtgen America's Amended Complaint as Exhibit 40. Except as so admitted, Caterpillar denies the remaining allegations of paragraph 81.

82. Caterpillar lacks sufficient knowledge and information to admit or deny the allegations of paragraph 82 and therefore denies them.

83. Caterpillar denies the allegations of paragraph 83.

84. Caterpillar denies the allegations of paragraph 84.

**COUNT 1: INFRINGEMENT OF U.S. PATENT NO. 7,828,309  
(FOUR-WAY FULL FLOATING 1)**

85. Caterpillar incorporates by reference its responses set forth in paragraphs 1-84 as if fully set forth herein.

86. Caterpillar denies the allegations of paragraph 86.

87. Admitted.

88. Caterpillar lacks sufficient knowledge and information to admit or deny the allegations of paragraph 88 and therefore denies them.

89. Admitted.

90. Caterpillar admits that the image depicted from a purported Caterpillar brochure appears to be that of a road-building machine. Except as so admitted, Caterpillar denies the remaining allegations of paragraph 90.

91. Caterpillar denies the allegations of paragraph 91.

92. Caterpillar denies the allegations of paragraph 92.

93. Caterpillar denies the allegations of paragraph 93.

94. Caterpillar denies the allegations of paragraph 94.

95. Caterpillar lacks sufficient knowledge and information to admit or deny the allegations of paragraph 95 and therefore denies them.

96. Caterpillar lacks sufficient knowledge and information to admit or deny the allegations of paragraph 96 and therefore denies them.

97. Caterpillar denies the allegations of paragraph 97.

98. Caterpillar lacks sufficient knowledge and information to admit or deny the allegations of paragraph 98 and therefore denies them.

99. Caterpillar denies the allegations of paragraph 99.

100. Caterpillar denies the allegations of paragraph 100.

101. Caterpillar denies the allegations of paragraph 101.

102. Caterpillar denies the allegations of paragraph 102.

103. Caterpillar denies the allegations of paragraph 103.

104. Caterpillar denies the allegations of paragraph 104.

105. Caterpillar denies the allegations of paragraph 105.

106. Caterpillar denies the allegations of paragraph 106.

107. Caterpillar lacks sufficient knowledge and information to admit or deny the allegations of paragraph 107 and therefore denies them.

108. Caterpillar admits that the '309 patent was identified in the original Complaint (D.I. 1), which was filed on June 16, 2017. Except as so admitted, Caterpillar denies the remaining allegations of paragraph 108.

109. The October 1, 2018 FID speaks for itself. Caterpillar denies the remaining allegations of paragraph 109.

110. Caterpillar denies the allegations of paragraph 110.

111. Caterpillar denies the allegations of paragraph 111.

112. Caterpillar denies the allegations of paragraph 112.

113. Caterpillar denies the allegations of paragraph 113.

114. Caterpillar denies the allegations of paragraph 114.

115. Caterpillar denies the allegations of paragraph 115.

**COUNT 2: INFRINGEMENT OF U.S. PATENT NO. 8,118,316**  
**(FOUR-WAY FULL FLOATING 2)**

116. Caterpillar incorporates by reference its responses set forth in paragraphs 1-115 as if fully set forth herein.

117. Caterpillar denies the allegations of paragraph 117.

118. Caterpillar denies the allegations of paragraph 118.

119. Caterpillar lacks sufficient knowledge and information to admit or deny the allegations of paragraph 119 and therefore denies them.

120. Caterpillar denies the allegations of paragraph 120.

121. Caterpillar admits that what purports to be a 2016 Operation and Maintenance Manual for the PM620 and PM622 Cold Planers states: “[m]inimize vibrations for a long work cycle or a long travel distance” and “[u]se the ride control system.” Except as so admitted, Caterpillar denies the remaining allegations of paragraph 121.

122. Caterpillar admits that claim 1 of the ’316 patent recites:

A method of operating a road-building machine, comprising:

- (a) providing a road-building machine including:
  - a chassis having a forward direction; a left front ground engaging support; a right front ground engaging support; a left rear ground engaging support; a right rear ground engaging support;
  - a first working cylinder rigidly connected to the chassis and connected to the left front ground engaging support for adjusting a height of the left front ground engaging support relative to the chassis;
  - a second working cylinder rigidly connected to the chassis and connected to the right front ground engaging support for adjusting a height of the right front ground engaging support relative to the chassis;
  - a third working cylinder rigidly connected to the chassis and connected to the left rear ground engaging support for adjusting a height of the left rear ground engaging support relative to the chassis;
  - a second working cylinder rigidly connected to the chassis and connected to the right rear ground engaging support for adjusting a height of the right rear ground engaging support relative to the chassis;
  - a rotating working drum supported from the chassis between the front ground engaging supports and the rear ground engaging supports and extending transversely in the forward direction;
  - each of the working cylinders including at least one working chamber filled with a pressure medium; and
  - coupling lines connecting the working cylinders to one another and providing a positive hydraulic coupling between the working cylinders;
- (b) adjusting the height of the left front and right rear ground engaging supports in a first direction; and
- (c) adjusting the height of the right front and left rear ground engaging supports in a second direction opposite the first direction.

Except as so admitted, Caterpillar denies the remaining allegations of paragraph 122.

123. Caterpillar denies the allegations of paragraph 123.

124. Caterpillar lacks sufficient knowledge and information to admit or deny the allegations of paragraph 124 and therefore denies them.

125. Admitted.

126. Admitted.

127. Caterpillar admits that what purports to be a 2016 Systems Operation Troubleshooting, PE622, PM620 and PM622 Cold Planers Electronic System manual states the “Ride Control System” “must be turned ON and OFF depending on what machine functions are active.” Caterpillar admits that what purports to be a 2016 Operation and Maintenance Manual for the PM620 and PM622 Cold Planers states: “[w]hen the button is pressed, all leg heights are first equalized then all four legs retract at the same rate.” Except as so admitted, Caterpillar denies the remaining allegations of paragraph 127.

128. Caterpillar denies the allegations of paragraph 128.

129. Caterpillar denies the allegations of paragraph 129.

130. Caterpillar denies the allegations of paragraph 130.

131. Caterpillar lacks sufficient knowledge and information to admit or deny the allegations of paragraph 131 and therefore denies them.

132. Caterpillar admits that the ’316 patent was identified in the original Complaint (D.I. 1), which was filed on June 16, 2017. Except as so admitted, Caterpillar denies the remaining allegations of paragraph 132.

133. Caterpillar denies the allegations of paragraph 133.

134. Caterpillar denies the allegations of paragraph 134.

135. Caterpillar denies the allegations of paragraph 135.

**COUNT 3: INFRINGEMENT OF U.S. PATENT NO. 7,530,641**  
**(DRIVING BACKWARDS)**

136. Caterpillar incorporates by reference its responses set forth in paragraphs 1-135 as if fully set forth herein.
137. Caterpillar denies the allegations of paragraph 137.
138. Caterpillar denies the allegations of paragraph 138.
139. Caterpillar denies the allegations of paragraph 139.
140. Caterpillar admits that claim 11 of the '641 patent recites:

Method for working ground surfaces (2) with a construction machine (1) that is automotive by means of traveling devices (8) and in which a milling drum (12) supported in a machine frame (4) is driven by a drive engine (6),

where the milling drum (12) is moved into a raised position when it is not in milling mode,

characterized in that,

the milling drum (12) remains coupled with the drive engine (6) when in raised position and with a direction of travel in which the rotating direction of the milling drum (12) corresponds to the rotating direction of the traveling devices (8),

in that a distance is monitored between the rotating, raised milling drum (12) and the ground surface (2) or an obstacle located in front of the milling (12) when seen in the direction of travel, and

in that the milling drum (12) is uncoupled from the drive engine (6), and/or the traveling devices (8) are uncoupled from the drive engine (6) and/or the machine frame (4) is raised and/or an alarm signal is generated when detecting that the deviation falls below a pre-determined distance between the milling drum (12) and the ground surface (2).

Except as so admitted, Caterpillar denies the remaining allegations of paragraph 140.

141. Caterpillar denies the allegations of paragraph 141.
142. Caterpillar denies the allegations of paragraph 142.
143. Caterpillar denies the allegations of paragraph 143.
144. Caterpillar denies the allegations of paragraph 144.

145. Caterpillar admits that paragraph 145 displays images from what purports to be a Caterpillar 2016 brochure for the PM620 and PM622 Cold Planers and 2020 publication regarding the PM310, PM312, and PM313 Cold Planers. Except as so admitted, Caterpillar denies the remaining allegations of paragraph 145.

146. Caterpillar denies the allegations of paragraph 146.

147. Caterpillar denies the allegations of paragraph 147.

148. Caterpillar admits that paragraph 148 displays what appears to be images, some altered from the original, from what purports to be a Caterpillar 2016 manual for Systems Operation Testing and Adjusting, PM620 and PM622 Cold Planer Machine System; 2016 Parts Manual for the PM620 Cold Planer; and 2020 publication regarding the PM310, PM312, and PM313 Cold Planers. Except as so admitted, Caterpillar denies the remaining allegations of paragraph 148.

149. Caterpillar lacks sufficient knowledge and information to admit or deny the allegations of paragraph 149 and therefore denies them.

150. Caterpillar admits that paragraph 150 displays portions of what purports to be a 2016 manual for Systems Operation Testing and Adjusting, PM620 and PM622 Cold Planer Machine System. Except as so admitted, Caterpillar denies the allegations of paragraph 150.

151. Caterpillar denies the allegations of paragraph 151.

152. Caterpillar admits that paragraph 152 displays portions of what purports to be a 2016 manual for Systems Operation Testing and Adjusting, PM620 and PM622 Cold Planer Machine System. Except as so admitted, Caterpillar denies the remaining allegations of paragraph 152.

153. Caterpillar denies the allegations of paragraph 153.

154. Caterpillar admits that paragraph 154 displays an image from what purports to be a 2020 publication regarding the PM310, PM312, and PM313 Cold Planers. Except as so admitted, Caterpillar denies the remaining allegations of paragraph 154.

155. Caterpillar denies the allegations of paragraph 155.

156. Caterpillar admits that paragraph 156 displays what appears to be an altered image from what purports to be a 2020 publication regarding the PM310, PM312, and PM313 Cold Planers. Except as so admitted, Caterpillar denies the remaining allegations of paragraph 156.

157. Caterpillar admits that paragraph 157 displays a portion of what purports to be a 2016 manual for Systems Operation Testing and Adjusting, PM620 and PM622 Cold Planer Machine System. Caterpillar admits that what purports to be language from a 2016 manual for Systems Operation Testing and Adjusting, PM620 and PM622 Cold Planer Machine System states: “[t]he moldboard status changes to ‘Not Lowered.’” Except as so admitted, Caterpillar denies the remaining allegations of paragraph 157.

158. Caterpillar admits that paragraph 158 displays a portion of what purports to be a 2016 manual for Systems Operation Testing and Adjusting, PM620 and PM622 Cold Planer Machine System. Except as so admitted, Caterpillar denies the remaining allegations of paragraph 158.

159. Caterpillar denies the allegations of paragraph 159.

160. Caterpillar denies the allegations of paragraph 160.

161. Admitted.

162. Caterpillar denies the allegations of paragraph 162.

163. Caterpillar denies the allegations of paragraph 163.

164. Admitted.

165. Caterpillar denies the allegations of paragraph 165.

166. Caterpillar denies the allegations of paragraph 166.

167. Caterpillar denies the allegations of paragraph 167.

168. Caterpillar denies the allegations of paragraph 168.

169. Caterpillar lacks sufficient knowledge and information to admit or deny the allegations of paragraph 169 and therefore denies them.

170. Caterpillar lacks sufficient knowledge and information to admit or deny the allegations of paragraph 170 and therefore denies them.

171. Caterpillar admits that the '641 patent was identified in the original Complaint (D.I. 1), which was filed on June 16, 2017. Except as so admitted, Caterpillar denies the remaining allegations of paragraph 171.

172. Caterpillar disagrees with the characterization of the proceedings and therefore denies the allegations of paragraph 172.

173. Caterpillar disagrees with the characterization of the proceedings and therefore denies the allegations of paragraph 173.

174. Caterpillar denies the allegations of paragraph 174.

175. Caterpillar denies the allegations of paragraph 175.

176. Caterpillar denies the allegations of paragraph 176.

177. Caterpillar denies the allegations of paragraph 177.

178. Caterpillar denies the allegations of paragraph 178.

**COUNT 4: INFRINGEMENT OF U.S. PATENT NO. 8,113,592**  
**(PATH MEASUREMENT 1)**

179. Caterpillar incorporates by reference its responses set forth in paragraphs 1-178 as if fully set forth herein.

180. Caterpillar denies the allegations of paragraph 180.
181. Caterpillar denies the allegations of paragraph 181.
182. Caterpillar admits that claim 1 of the '592 patent recites:

A road construction machine, comprising: a machine frame; a working drum supported from the machine frame for working a ground surface or traffic surface; a plurality of ground engaging supports for supporting the construction machine on the ground surface or traffic surface; a plurality of lifting columns, each one of the lifting columns being connected between the machine frame and one of the ground engaging supports, each one of the lifting columns including two telescoping hollow cylinders and at least one piston-cylinder unit located within the telescoping hollow cylinders for adjusting a height of the lifting column so that each one of the lifting columns is individually adjustable in height relative to the machine frame, each lifting column having a lifting position corresponding to a position of one of the two telescoping hollow cylinders relative to the other of the two telescoping hollow cylinders; a plurality of lifting position measuring devices, each lifting position measuring device being coupled with elements of one of the lifting columns, which elements are capable of being displaced relative to one another in accordance with the lifting position of the lifting column in such a manner that a path signal pertaining to the lifting position of the lifting column is continuously detectable by the measuring device; and a controller operably connected to the lifting position measuring devices to receive the path signals from the lifting position measuring devices, the controller being operable to regulate the lifting positions of the lifting columns in response to the path signals detected by the lifting position measuring devices.

Except as so admitted, Caterpillar denies the remaining allegations of paragraph 182.

183. Caterpillar denies the allegations of paragraph 183.
184. Caterpillar denies the allegations of paragraph 184.
185. Caterpillar denies the allegations of paragraph 185.
186. Caterpillar denies the allegations of paragraph 186.

187. Caterpillar admits that paragraph 187 displays a portion of what purports to be a Systems Operation Testing and Adjusting, PM620 and PM622 Cold Planer Machine System. Except as so admitted, Caterpillar denies the remaining allegations of paragraph 187.

188. Caterpillar admits that paragraph 188 displays portions of what purports to be a 2016 manual for Systems Operation Testing and Adjusting, PM620 and PM622 Cold Planer Machine System. Caterpillar admits that paragraph 188 displays what appears to be an altered image from what purports to be a Schematic for PM620 and PM622 Cold Planar, Electrical System, Volume 2 of 4: Platform and Chassis. Except as so admitted, Caterpillar denies the remaining allegations of paragraph 188.

189. Caterpillar admits that paragraph 189 displays images from what purports to be a 2016 manual for Systems Operation Testing and Adjusting, PM620 and PM622 Cold Planer Machine System. Except as so admitted, Caterpillar denies the remaining allegations of paragraph 189.

190. Caterpillar admits that paragraph 190 includes a link to what purports to be a video walkaround of the PM620 on YouTube. Except as so admitted, Caterpillar denies the remaining allegations of paragraph 190.

191. Caterpillar admits that paragraph 191 displays a portion of what purports to be a 2016 manual for Systems Operation Troubleshooting, PE622, PM620 and PM622 Cold Planers Electronic System; 2016 manual for Systems Operation Testing and Adjusting Troubleshooting, PM620 and PM622 Cold Planer Monitoring System/Grade and Slope; and 2016 manual for Systems Operation Testing and Adjusting, PM620 and PM622 Cold Planer Machine System. Except as so admitted, Caterpillar denies the remaining allegations of paragraph 191.

192. Caterpillar admits that paragraph 192 displays portions of what purports to be a 2016 Operation and Maintenance Manual for the PM620 and PM622 Cold Planers. Except as so admitted, Caterpillar denies the remaining allegations of paragraph 192.

193. Caterpillar admits that paragraph 193 displays portions of what purports to be a 2016 Operation and Maintenance Manual, PM620 and PM622 Cold Planers. Except as so admitted, Caterpillar denies the remaining allegations of paragraph 193.

194. Caterpillar denies the allegations of paragraph 194.

195. Caterpillar admits that claim 5 of the '592 patent recites:

The road construction machine of claim 1, wherein:  
the controller is operable to define a reference plane relative to the ground surface or traffic surface, and the controller is operable to store measured signals from the lifting position measuring devices corresponding to current lifting positions of the lifting columns and to thereby define a current spatial position of the machine frame relative to the reference plane as a reference spatial position of the machine frame.

Except as so admitted, Caterpillar denies the remaining allegations of paragraph 195.

196. Caterpillar admits that what purports to be a 2016 manual for Systems Operation Testing and Adjusting, PM620 and PM622 Cold Planer Machine System states: "the ECM maintains equal velocity and relative position for each leg to keep the machine pitch and slope stable." Except as so admitted, Caterpillar denies the remaining allegations of paragraph 196.

197. Caterpillar denies the allegations of paragraph 197.

198. Caterpillar admits that claim 15 of the '592 patent recites:

The road construction machine of claim 1, wherein:  
the controller is operable to regulate a working depth of the working drum at least in part in response to the path signals measured by the measuring devices.

Except as so admitted, Caterpillar denies the remaining allegations of paragraph 198.

199. Caterpillar admits that paragraph 199 displays portions of what purports to be a 2016 manual for Systems Operation Testing and Adjusting, PM620 and PM622 Cold Planer Machine System and 2016 manual for Systems Operation Testing and Adjusting Troubleshooting, PM620 and PM622 Cold Planer Monitoring System/Grade and Slope. Except as so admitted, Caterpillar denies the remaining allegations of paragraph 199.

200. Caterpillar denies the allegations of paragraph 200.

201. Caterpillar denies the allegations of paragraph 201.

202. Caterpillar denies the allegations of paragraph 202.

203. Caterpillar lacks sufficient knowledge and information to admit or deny the allegations of paragraph 203 and therefore denies them.

204. Caterpillar admits that the '592 patent was identified in the original Complaint (D.I. 1), which was filed on June 16, 2017. Except as so admitted, Caterpillar denies the remaining allegations of paragraph 204.

205. Caterpillar denies the allegations of paragraph 205.

206. Caterpillar denies the allegations of paragraph 206.

207. Caterpillar denies the allegations of paragraph 207.

**COUNT 5: INFRINGEMENT OF U.S. PATENT NO. 9,010,871  
(PATH MEASUREMENT 2)**

208. Caterpillar incorporates by reference its responses set forth in paragraphs 1-207 as if fully set forth herein.

209. Caterpillar denies the allegations of paragraph 209.

210. Caterpillar denies the allegations of paragraph 210.

211. Caterpillar denies the allegations of paragraph 211.

212. Caterpillar denies the allegations of paragraph 212.

213. Caterpillar admits that claim 1 of the '871 patent recites:

A road construction machine, comprising: a machine frame; a working drum supported from the machine frame for working a ground surface or traffic surface; a plurality of ground engaging supports for supporting the construction machine on the ground surface or traffic surface; a plurality of lifting columns, each one of the lifting columns being connected between the machine frame and one of the ground engaging supports, each one of the lifting columns including two telescoping hollow column members and at least one piston-cylinder unit located within the telescoping hollow column members for adjusting a height of the lifting column so that each one of the lifting columns is individually adjustable in height relative to the machine frame, each lifting column having a lifting position corresponding to a position of one of the two telescoping hollow column members relative to the other of the two telescoping hollow column members; a plurality of lifting position measuring devices, each lifting position measuring device being coupled with elements of one of the lifting columns, which elements are capable of being displaced relative to one another in accordance with the lifting position of the lifting column in such a manner that a path signal pertaining to the lifting position of the lifting column is continuously detectable by the measuring device.

Except as so admitted, Caterpillar denies the remaining allegations of paragraph 213.

214. Caterpillar denies the allegations of paragraph 214.

215. Caterpillar admits that claim 23 of the '871 recites:

A method of operating a road construction machine, the machine including a machine frame, a working drum supported from the machine frame, a plurality of ground engaging supports, and a plurality of lifting columns connected between the machine frame and the ground engaging supports, the method comprising:

detecting a lifting position of each of the lifting columns and continuously generating a path signal for each lifting column corresponding to the lifting positions of each lifting column.

Except as so admitted, Caterpillar denies the remaining allegations of 215.

216. Caterpillar denies the allegations of paragraph 216.

217. Admitted.

218. Admitted.

219. Admitted.
220. Caterpillar denies the allegations of paragraph 220.
221. Caterpillar denies the allegations of paragraph 221.
222. Caterpillar denies the allegations of paragraph 222.
223. Caterpillar lacks sufficient knowledge and information to admit or deny the allegations of paragraph 223 and therefore denies them.

224. Caterpillar admits that the '871 patent was identified in the original Complaint (D.I. 1), which was filed on June 16, 2017. Except as so admitted, Caterpillar denies the remaining allegations of paragraph 224.

225. Caterpillar denies the allegations of paragraph 225.
226. Caterpillar denies the allegations of paragraph 226.
227. Caterpillar denies the allegations of paragraph 227.

**COUNT 6: INFRINGEMENT OF U.S. PATENT NO. 9,656,530**  
**(PATH MEASUREMENT 3)**

228. Caterpillar incorporates by reference its responses set forth in paragraphs 1-227 as if fully set forth herein.
229. Caterpillar denies the allegations of paragraph 229.
230. Caterpillar denies the allegations of paragraph 230.
231. Caterpillar admits that claim 1 of the '530 patent recites:

A road construction machine, comprising: a machine frame;  
a working drum supported from the machine frame for working a  
ground surface or traffic surface;  
a plurality of ground engaging supports for supporting the  
construction machine on the ground surface or traffic surface;  
a plurality of lifting columns, each one of the lifting columns being  
connected between the machine frame and one of the ground engaging  
supports, each one of the lifting columns including two telescoping hollow  
column members and at least one piston-cylinder unit located within the  
telescoping hollow column members for adjusting a height of the lifting

column so that each one of the lifting columns is adjustable in height relative to the machine frame, each lifting column having a lifting position corresponding to a position of one of the two telescoping hollow column members relative to the other of the two telescoping hollow column members; and

a plurality of lifting position sensors, each lifting position sensor being coupled with elements of one of the lifting columns, which elements are capable of being displaced relative to one another in accordance with the lifting position of the lifting column in such a manner that a signal including information on a current lifting position of a column is produced by the lifting position sensor, wherein each of the lifting position sensors is connected to the at least one piston cylinder unit located within its associated lifting column.

Except as so recited. Caterpillar denies the remaining allegations of paragraph 231.

232. Caterpillar denies the allegations of paragraph 232.

233. Caterpillar denies the allegations of paragraph 233.

234. Caterpillar denies the allegations of paragraph 234.

235. Caterpillar lacks sufficient knowledge and information to admit or deny the allegations of paragraph 235 and therefore denies them.

236. Caterpillar admits that the '530 patent was identified in the original Complaint (D.I. 1), which was filed on June 16, 2017. Except as so admitted, Caterpillar denies the remaining allegations of paragraph 236.

237. The October 1, 2018 FID speaks for itself. Caterpillar denies the remaining allegations of paragraph 237.

238. Caterpillar admits that the PTAB issued a final written decision that Caterpillar had not established that claims 2, 5, 16, and 23 of the '530 patent were unpatentable in view of the prior art presented. Caterpillar further admits that that decision was affirmed by the Federal Circuit. Except as so admitted, Caterpillar denies the remaining allegations of paragraph 238.

239. Caterpillar denies the allegations of paragraph 239.

240. Caterpillar denies the allegations of paragraph 240.

241. Caterpillar denies the allegations of paragraph 241.

242. Caterpillar denies the allegations of paragraph 242.

**COUNT 7: INFRINGEMENT OF U.S. PATENT NO. 7,946,788**  
**(SENSOR SWITCHING 1)**

243. Caterpillar incorporates by reference its responses set forth in paragraphs 1-242 as if fully set forth herein.

244. Caterpillar denies the allegations of paragraph 244.

245. Caterpillar denies the allegations of paragraph 245.

246. Caterpillar denies the allegations of paragraph 246.

247. Caterpillar denies the allegations of paragraph 247.

248. Caterpillar admits that claim 1 of the '788 recites:

A road construction machine for the treatment of road surfaces, comprising: a milling drum, the milling drum being position adjustable with regard to milling depth and/or slope; and

a leveling system operable to control the milling depth and/or slope, the leveling system including:

a plurality of selectable sensors for sensing current actual values of operating parameters including the milling depth and/or the slope of the milling drum relative to a reference surface;

a plurality of indication and setting devices, each of the indication and setting devices being associable with at least one of the plurality of selectable sensors, each indication and setting device being operable to indicate the current actual value of and to set a set value for the operating parameter sensed by its associated sensor;

a controller operable to control the milling depth and/or the slope of the milling drum conditioned on set values and sensed current actual values of the operating parameters sensed by a selected subset of the plurality of selectable sensors by returning at least one adjustment value to adjust the milling depth and/or the slope of the milling drum so that the sensed current actual values of the operating parameters approach the set values for the selected subset of the plurality of selectable sensors;

a switchover device operable to switch over from control based upon a first selected subset of the plurality of selectable sensors to control based upon a second selected subset, the second selected subset exchanging at least one replacement sensor not in the first subset for at least one replaced sensor that was in the first subset; and

the controller being operable to effect switchover from control based upon the first selected subset of selectable sensors during milling operation without interruption of the milling operation and without any erratic alteration of the at least one adjustment value for adjusting the milling depth and/or slope of the milling drum.

Except as so admitted, Caterpillar denies the remaining allegations of paragraph 248.

249. Caterpillar denies the allegations of paragraph 249.

250. Caterpillar admits that paragraph 250 displays what appears to be altered images from what purports to be a 2016 Parts Manual for the PM620 Cold Planer. Except as so admitted, Caterpillar denies the remaining allegations of paragraph 250.

251. Caterpillar admits that paragraph 251 displays what appears to be an altered image from what purports to be a 2016 Caterpillar brochure for the PM620 and PM622 Cold Planers. Except as so admitted, Caterpillar denies the remaining allegations of paragraph 251.

252. Caterpillar admits that paragraph 252 includes what appears to be a link to a Caterpillar marketing video posted on YouTube. Except as so admitted, Caterpillar denies the remaining allegations of paragraph 252.

253. Caterpillar admits that paragraph 253 includes what appears to be a link to a Caterpillar marketing video posted on YouTube. Except as so admitted, Caterpillar denies the remaining allegations of paragraph 253.

254. Caterpillar denies the allegations of paragraph 254.

255. Caterpillar admits that claim 3 of the '788 patent recites:

The road construction machine of claim 1, wherein: the controller is operable to set, no later than at the time of the switchover, a set value for an operating parameter for the replacement sensor to the current actual value for the operating parameter of the replacement sensor.

Except as so admitted, Caterpillar denies the remaining allegations of paragraph 255.

256. Caterpillar denies the allegations of paragraph 256.

257. Caterpillar denies the allegations of paragraph 257.

258. Caterpillar admits that claim 15 of the '788 paragraph recites:

A method of controlling the milling depth and/or the slope of a milling drum of a road construction machine, the method comprising:

(a) setting a set value for an operational parameter of at least one sensor, the operational parameter being milling depth of the milling drum associated with the at least one sensor and/or slope of the drum;

(b) conducting a milling operation;

(c) during the milling operation, sensing a current actual value of the operational parameter of the at least one sensor relative to a reference surface;

(d) generating an adjustment value with a controller, the adjustment value correlating to a difference between the set value and the current actual value of the operational parameter of the at least one sensor;

(e) controlling the milling depth and/or the slope of the milling drum based on the adjustment value; and

without interrupting the milling operation, switching over the control of the milling depth from control based at least in part on the at least one sensor to control based at least in part on a replacement sensor not included in the at least one sensor, without altering the adjustment value at the time of switching over.

Except as so admitted, Caterpillar denies the remaining allegations of paragraph 258.

259. Caterpillar lacks sufficient knowledge and information to admit or deny the allegations of paragraph 259 and therefore denies them.

260. Caterpillar admits that what purports to be a 2016 Paving Product Line brochure states: "Sensor configurations are hot swappable, allowing changes to occur while under operation[]" and "Hot swapping capability allows operator to change references while milling." Caterpillar admits that what purports to be a 2020 brochure for the PM620, PM622 Cold Planers states: "Seamlessly swap between multiple grade or slope sensors for uninterrupted accuracy and a smooth result for any project." Except as so admitted, Caterpillar denies the remaining allegations of paragraph 260.

261. Caterpillar denies the allegations of paragraph 261.

262. Caterpillar denies the allegations of paragraph 262.

263. Caterpillar denies the allegations of paragraph 263.
264. Caterpillar denies the allegations of paragraph 264.
265. Caterpillar denies the allegations of paragraph 265.
266. Caterpillar denies the allegations of paragraph 266.
267. Caterpillar denies the allegations of paragraph 267.

**COUNT 8: INFRINGEMENT OF U.S. PATENT NO. 8,511,932**  
**(SENSOR SWITCHING 2)**

268. Caterpillar incorporates by references its responses set forth in paragraphs 1-267 as if fully set forth herein.

269. Caterpillar denies the allegations of paragraph 269.
270. Caterpillar denies the allegations of paragraph 270.
271. Caterpillar denies the allegations of paragraph 271.
272. Caterpillar denies the allegations of paragraph 272.
273. Caterpillar admits that claim of the '932 recites:

A method of controlling at least one position characteristic of a milling drum of a road construction machine, the at least one position characteristic being from the group consisting of the milling depth of the drum and the slope of the drum, the method comprising:

- (a) setting a set value for an operational parameter of at least one sensor, the operational parameter being the operational parameter corresponding to at least one of the milling depth of the drum and the slope of the drum;
- (b) conducting a milling operation;
- (c) during the milling operation, sensing a current actual value of the operational parameter of the at least one sensor;
- (d) generating an adjustment value with a controller, the adjustment value correlating to a difference between the set value and the current actual value of the operational parameter of the at least one sensor;
- (e) controlling the at least one position characteristic based on the adjustment value;
- (f) without interrupting the milling operation, switching over the control of the at least one position characteristic from control based at

least in part on the at least one sensor to control based at least in part on a replacement sensor not included in the at least one sensor; and

(g)setting a value for the operational parameter of the replacement sensor to a current measured actual value of the operational parameter of the replacement sensor.

Except as so admitted, Caterpillar denies the remaining allegations of paragraph 273.

274. Caterpillar admits that claim 9 of the '932 patent recites:

A road construction machine for the treatment of road surfaces, comprising: a milling drum, the milling drum being position adjustable with regard to at least one position characteristic selected from the group consisting of milling depth of the drum and slope of the drum; and

a leveling system configured to control the at least one position characteristic, the leveling system including:

a plurality of selectable sensors, each sensor configured to sense a current actual value of an operating parameter corresponding to at least one of the milling depth of the drum and the slope of the drum;

a plurality of indication and setting devices, each of the indication and setting devices being associable with at least one of the plurality of selectable sensors, each indication and setting device being operable to indicate the current actual value of and to set a set value for each operating parameter sensed by its associated sensor or sensors;

a controller and switchover system configured to control the at least one position characteristic conditioned on set values or values and sensed current actual value or values of the operating parameter or parameters sensed by a selected subset of the plurality of selectable sensors by returning at least one adjustment value to adjust the at least one position characteristic so that the sensed current actual value or values of the operating parameter or parameters approach the set value or values for the selected subset of the plurality of selectable sensors;

the controller and switchover system being configured to switch over from control based upon a first selected subset of the plurality of selectable sensors to control based upon a second selected subset during milling operation without interruption of the milling operation, the second selected subset exchanging at least one replacement sensor not in the first subset for at least one replaced sensor that was in the first subset; and

wherein the controller and switchover system is operable to set a set value for an operating parameter for the replacement sensor to the current actual value for the operating parameter of the replacement sensor.

Except as so admitted, Caterpillar denies the remaining allegations of paragraph 274.

275. Caterpillar denies the allegations of paragraph 275.

276. Caterpillar denies the allegations of paragraph 276.

277. Caterpillar denies the allegations of paragraph 277.

278. Caterpillar lacks sufficient knowledge and information to admit or deny the allegations of paragraph 278 and therefore denies them.

279. Caterpillar admits that the '932 patent was identified in the original Complaint (D.I. 1), which was filed on June 16, 2017. Except as so admitted, Caterpillar denies the remaining allegations of paragraph 279.

280. Caterpillar denies the allegations of paragraph 280.

281. Caterpillar denies the allegations of paragraph 281.

282. Caterpillar denies the allegations of paragraph 282.

**COUNT 9: INFRINGEMENT OF U.S. PATENT NO. 8,690,474**  
**(SENSOR SWITCHING 3)**

283. Caterpillar incorporates by references its responses set forth in paragraphs 1-282 as if fully set forth herein.

284. Caterpillar denies the allegations of paragraph 284.

285. Caterpillar denies the allegations of paragraph 285.

286. Caterpillar denies the allegations of paragraph 286.

287. Caterpillar denies the allegations of paragraph 287.

288. Caterpillar admits that claim 1 of the '474 patent recites:

A method of controlling at least one position characteristic of a milling drum of a road construction machine, the at least one position characteristic being from the group consisting of the milling depth of the drum and the slope of the drum, the method comprising:

(a) setting a set value for an operational parameter of at least one sensor, the operational parameter corresponding to at least one of the milling depth of the drum and the slope of the drum;

(b) conducting a milling operation;

- (c) during the milling operation, sensing a current actual value of the operational parameter of the at least one sensor;
- (d) generating an adjustment value with a controller, the adjustment value correlating to a difference between the set value and the current actual value of the operational parameter of the at least one sensor;
- (e) controlling the at least one position characteristic based on the adjustment value;
- (f) without interrupting the milling operation, switching over the control of the at least one position characteristic from control based at least in part on the at least one sensor to control based at least in part on a replacement sensor not included in the at least one sensor; and
- (g) changing at least one of a set value of an operational parameter of the replacement sensor and a current measured actual value of the operational parameter of the replacement sensor such that the adjustment value is unchanged at the time of switching over.

Except as so admitted, Caterpillar denies the remaining allegations of paragraph 288.

289. Caterpillar admits that claim 19 of the '474 recites:

A road construction machine for the treatment of road surfaces, comprising:

a milling drum, the milling drum being position adjustable with regard to at least one position characteristic selected from the group consisting of milling depth of the drum and slope of the drum; and

a leveling system configured to control the at least one position characteristic, the leveling system including:

a plurality of selectable sensors, each sensor configured to sense a current actual value of an operating parameter corresponding to at least one of the milling depth of the drum and the slope of the drum;

a plurality of indication and setting devices, each of the indication and setting devices being associable with at least one of the plurality of selectable sensors, each indication and setting device being operable to indicate the current actual value of and to set a set value for each operating parameter sensed by its associated sensor or sensors;

a controller and switchover system configured to control the at least one position characteristic conditioned on set value or values and sensed current actual value or values of the operating parameter or parameters sensed by a selected subset of the plurality of selectable sensors by returning at least one adjustment value to adjust the at least one position characteristic so that the sensed current actual value or values of the operating parameter or parameters approach the set value or values for the selected subset of the plurality of selectable sensors;

the controller and switchover system being configured to switch over from control based upon a first selected subset of the plurality of selectable sensors to control based upon a second selected subset during milling operation without interruption of the milling operation, the second selected subset exchanging at least one replacement sensor not in the first subset for at least one replaced sensor that was in the first subset; and

wherein the controller and switchover system is operable to change at least one of the set value of the operating parameter of the replacement sensor and the sensed current actual value of the operating parameter of the replacement sensor such that the adjustment value is unchanged at the time of switch over.

Except as so admitted, Caterpillar denies the remaining allegations of paragraph 289.

290. Caterpillar denies the allegations of paragraph 290.

291. Caterpillar denies the allegations of paragraph 291.

292. Caterpillar denies the allegations of paragraph 292.

293. Caterpillar lacks sufficient knowledge and information as to admit or deny the allegations of paragraph 293 and therefore denies them.

294. Caterpillar admits that the '474 patent was identified in the original Complaint (D.I. 1), which was filed on June 16, 2017. Except as so admitted, Caterpillar denies the remaining allegations of paragraph 294.

295. Caterpillar denies the allegations of paragraph 295.

296. Caterpillar denies the allegations of paragraph 296.

297. Caterpillar denies the allegations of paragraph 297.

**COUNT 10: INFRINGEMENT OF U.S. PATENT NO. RE48,268**  
**(VIBRATION MOUNTING)**

298. Caterpillar incorporates by references its responses set forth in paragraphs 1-297 as if fully set forth herein.

299. Caterpillar denies the allegations of paragraph 299.

300. Caterpillar denies the allegations of paragraph 300.

301. Caterpillar denies the allegations of paragraph 301.
302. Caterpillar denies the allegations of paragraph 302.
303. Caterpillar admits that claim 14 of the '268 patent recites:

A construction machine, comprising:  
a machine frame carried by a chassis;  
a working drum;  
a drive train including at least the following elements:  
a drive engine;  
a traction drive assembly for mechanically driving the working drum, the traction drive assembly including a drive [element] pulley, [an output element] a driven pulley, and a [traction element] drive belt connecting the pulleys;  
a clutch for switching [the] a torque between the drive engine and the working drum; and  
a hydraulic pump drive; and  
wherein the elements of the drive train are divided into at least a first subset and a second subset; and  
wherein the drive train further includes an articulated coupling connecting  
the first subset to the second subset; and  
wherein the first subset includes at least the drive engine; and  
wherein the second subset includes [at least one element selected from the group consisting of]:  
the hydraulic pump drive;  
the clutch; and  
the drive [element] pulley of the traction drive assembly; and  
wherein the first subset is attached to the machine frame elastically with a lower spring stiffness so that transmission of vibrations to the machine frame is reduced, and the second subset is attached to the machine frame with a higher spring stiffness or in a rigid manner;  
*wherein the clutch is connected between the hydraulic pump drive and the drive pulley;*  
*wherein the drive engine has an output axis aligned with an input axis of the hydraulic pump drive and with an input axis of the drive pulley prior to operation of the construction machine; and*  
*wherein the articulated coupling accommodates a lack of alignment between the output axis of the drive engine and the input axes of the hydraulic pump drive and the drive pulley due to dynamic movement of the first subset relative to the second subset during operation of the construction machine.*

Except as so admitted, Caterpillar denies the remaining allegations of paragraph 303.

304. Caterpillar denies the allegations of paragraph 304.

305. Caterpillar admits that paragraph 305 displays an image from what purports to be a 2016 brochure for the PM620 and PM622 Cold Planers. Except as so admitted, Caterpillar denies the remaining allegations of paragraph 305.

306. Caterpillar admits that paragraph 306 displays what appears to be an altered version of an image from what purports to be a 2016 Parts Manual for the PM620 Cold Planer. Except as so admitted, Caterpillar denies the remaining allegations of paragraph 306.

307. Caterpillar admits that paragraph 307 displays what appears to be an altered image from what purports to be a 2016 Systems Operation Testing and Adjusting, PM620, PM622 Cold Planer Machine System manual. Except as so admitted, Caterpillar denies the remaining allegations of paragraph 307.

308. Caterpillar admits that paragraph 308 displays images from what purports to be a 2016 Parts Manual for the PM620 Cold Planer. Except as so admitted, Caterpillar denies the remaining allegations of paragraph 308.

309. Caterpillar admits that paragraph 309 displays altered images from what purports to be a 2016 Parts Manual for the PM620 Cold Planer. Except as so admitted, Caterpillar denies the remaining allegations of paragraph 309.

310. Caterpillar lacks sufficient knowledge and information to admit or deny the allegations of paragraph 310 and therefore denies them.

311. Caterpillar admits that paragraph 311 displays an image from what purports to be a 2016 Parts Manual for the PM620 Cold Planer. Except as so admitted, Caterpillar denies the remaining allegations of paragraph 311.

312. Caterpillar admits that paragraph 312 displays images from what purports to be a 2016 Parts Manual for the PM620 Cold Planer. Except as so admitted, Caterpillar denies the remaining allegations of paragraph 312.

313. Caterpillar denies the allegations of paragraph 313.

314. Admitted.

315. Caterpillar admits that paragraph 315 displays what appears to be an altered image from what purports to be a 2016 Parts Manual for the PM620 Cold Planer. Except as so admitted, Caterpillar denies the remaining allegations of paragraph 315.

316. Caterpillar denies the allegations of paragraph 316.

317. Caterpillar admits that claim 1 of the '268 patent recites:

A method of operating a construction machine, the construction machine including a machine frame carried by a chassis, a working drum, and a drive train, the drive train including at least a drive engine component, ~~[a traction drive component for driving the working drum,]~~ a clutch component, ~~[and]~~ a hydraulic pump drive component, *and a traction drive for driving the working drum including a drive pulley, a driven pulley attached to the working drum, and a drive belt connecting the pulleys,* the method comprising:

(a)driving a subset of the components of the drive train from the drive engine component with an articulated coupling connected between the drive engine component and the subset of the components, the subset including at least *the drive pulley* of the traction drive ~~[component for driving the working drum]~~, *the clutch component and the hydraulic pump drive component, with the clutch component being located between the hydraulic pump drive component and the drive pulley;*

(b)supporting the drive engine component from the machine frame elastically with a first spring stiffness; and

(c)supporting the subset of the components from the machine frame in a rigid manner or with a second spring stiffness~~[, the second spring stiffness]~~ being relatively higher than the first spring stiffness;

*wherein the drive engine component has an output axis aligned with an input axis of the hydraulic pump drive component and with an input axis of the drive pulley prior to operation of the construction machine; and*

*wherein in step (a) the articulated coupling accommodates a lack of alignment between the output axis of the drive engine component and the input axes of the hydraulic pump drive component and the drive pulley due to dynamic movement of the drive engine component relative to the subset of the components during operation of the construction machine.*

Except as so admitted, Caterpillar denies the remaining allegations of paragraph 317.

318. Caterpillar denies the allegations of paragraph 318.
319. Caterpillar denies the allegations of paragraph 319.
320. Caterpillar denies the allegations of paragraph 320.
321. Caterpillar denies the allegations of paragraph 321.
322. Caterpillar denies the allegations of paragraph 322.
323. Caterpillar denies the allegations of paragraph 323.
324. Caterpillar denies the allegations of paragraph 324.

**COUNT 11: INFRINGEMENT OF U.S. PATENT NO. 8,424,972  
(PARALLEL TO SURFACE)**

325. Caterpillar incorporates by references its responses set forth in paragraphs 1-324 as if fully set forth herein.

326. Caterpillar denies the allegations of paragraph 326.
327. Caterpillar denies the allegations of paragraph 327.
328. Caterpillar denies the allegations of paragraph 328.
329. Caterpillar denies the allegations of paragraph 329.
330. Caterpillar admits that claim 1 of the '972 recites:

A self-propelling road milling machine, comprising:  
a machine frame;  
at least two front ground engaging supports, and at least one rear ground  
engaging support, with reference to a direction of travel;  
front and rear lifting columns supporting the frame from the ground  
engaging supports;  
a milling roller supported from the frame for treatment of a ground surface;

first and second height adjustable side plates arranged on opposite sides of the milling roller;

a height adjustable stripping plate arranged behind the milling roller and operable to be lowered, during operation, into a milling track generated by the milling roller;

at least one ground engaging sensor; and

a controller operably associated with the at least one ground engaging sensor, the controller being configured to automatically control a lifting condition of at least one of the lifting columns to establish a parallel orientation of the machine frame relative to the ground surface in the direction of travel.

Except as so admitted, Caterpillar denies the remaining allegations of paragraph 330.

331. Caterpillar denies the allegations of paragraph 331.
332. Caterpillar denies the allegations of paragraph 332.
333. Caterpillar denies the allegations of paragraph 333.
334. Caterpillar denies the allegations of paragraph 334.
335. Caterpillar denies the allegations of paragraph 335.
336. Caterpillar denies the allegations of paragraph 336.
337. Caterpillar denies the allegations of paragraph 337.
338. Caterpillar denies the allegations of paragraph 338.
339. Caterpillar denies the allegations of paragraph 339.
340. Caterpillar denies the allegations of paragraph 340.
341. Caterpillar denies the allegations of paragraph 341.
342. Caterpillar denies the allegations of paragraph 342.
343. Admitted.
344. Caterpillar denies the allegations of paragraph 344.
345. Caterpillar denies the allegations of paragraph 345.
346. Admitted.
347. Admitted.

348. Caterpillar denies the allegations of paragraph 348.

349. Caterpillar admits that the specification of the '972 patent includes the quoted language. Except as so admitted, Caterpillar denies the remaining allegations of paragraph 349.

350. Caterpillar denies the allegations of paragraph 350.

351. Caterpillar denies the allegations of paragraph 351.

352. Caterpillar denies the allegations of paragraph 352.

353. Caterpillar denies the allegations of paragraph 353.

354. Admitted.

355. Caterpillar denies the allegations of paragraph 355.

356. Caterpillar denies the allegations of paragraph 356.

357. Caterpillar denies the allegations of paragraph 357.

358. Caterpillar denies the allegations of paragraph 358.

359. Caterpillar denies the allegations of paragraph 359.

360. Caterpillar lacks sufficient knowledge and information to admit or deny the allegations of paragraph 360.

361. Caterpillar lacks sufficient knowledge and information to admit or deny the allegations of paragraph 361.

362. Caterpillar denies the allegations of paragraph 362.

363. Caterpillar denies the allegations of paragraph 363.

364. Caterpillar denies the allegations of paragraph 364.

**COUNT 12: INFRINGEMENT OF U.S. PATENT NO. 9,879,390**  
**(SMART SIDE PLATE 1)**

365. Caterpillar incorporates by references its responses set forth in paragraphs 1-364 as if fully set forth herein.

366. Caterpillar denies the allegations of paragraph 366.

367. Caterpillar denies the allegations of paragraph 367.

368. Caterpillar admits that claim 1 of the '390 recites:

A self-propelled road milling machine, comprising:  
a machine frame;  
at least two front ground engaging supports, and at least one rear ground engaging support;  
front and rear lifting columns supporting the frame from the ground engaging supports;  
a milling roller supported from the frame for treatment of a ground surface;  
a height adjustable stripping plate arranged behind the milling roller and operable to be lowered, during operation, into a milling track generated by the milling roller;  
first and second height adjustable side plates arranged on opposite sides of the milling roller; and  
a plurality of position sensors, each of the first and second side plates including at least two of the position sensors spaced apart in a traveling direction of the milling machine, wherein each position sensor generates position signals representing changes in position for a respective side plate.

Except as so admitted, Caterpillar denies the remaining allegations of paragraph 368.

369. Caterpillar denies the allegations of paragraph 369.

370. Caterpillar denies the allegations of paragraph 370.

371. Caterpillar denies the allegations of paragraph 371.

372. Caterpillar denies the allegations of paragraph 372.

373. Caterpillar admits that paragraph 373 displays what appears to be an altered image from what purports to be a 2016 Parts Manual for the PM620 Cold Planer. Except as so admitted, Caterpillar denies the remaining allegations of paragraph 373.

374. Caterpillar admits that paragraph 374 displays what appears to be an altered image from what purports to be a 2020 brochure for PM310, PM312 and PM313 Cold Planers. Except as so admitted, Caterpillar denies the remaining allegations of paragraph 374.

375. Caterpillar denies the allegations of paragraph 375.

376. Admitted.

377. Admitted.

378. Admitted.

379. Caterpillar denies the allegations of paragraph 379.

380. Caterpillar admits that paragraph 380 displays what appears to be an altered image from what purports to be a 2020 brochure for PM310, PM312 and PM313 Cold Planers. Except as so admitted, Caterpillar denies the remaining allegations of paragraph 380.

381. Caterpillar admits that paragraph 381 displays an image from what purports to be a 2016 manual for Systems Operation Testing and Adjusting Troubleshooting, PM620 and PM622 Cold Planer Monitoring System/Grade and Slope. Except as so admitted, Caterpillar denies the remaining allegations of paragraph 381.

382. Caterpillar denies the allegations of paragraph 382.

383. Caterpillar denies the allegations of paragraph 383.

384. Caterpillar denies the allegations of paragraph 384.

385. Caterpillar denies the allegations of paragraph 385.

386. Caterpillar denies the allegations of paragraph 386.

387. Caterpillar denies the allegations of paragraph 387.

**COUNT 13: INFRINGEMENT OF U.S. PATENT NO. 9,879,391**  
**(SMART SIDE PLATE 2)**

388. Caterpillar incorporates by reference its responses set forth in paragraphs 1-387 as if fully set forth herein.

389. Caterpillar denies the allegations of paragraph 389.

390. Caterpillar denies the allegations of paragraph 390.

391. Caterpillar denies the allegations of paragraph 391.

392. Caterpillar admits that claim 8 of the '391 patent recites:

A method of controlling a milling machine, the milling machine having a machine frame, a milling roller supported from the machine frame, front and rear ground engaging supports, front and rear lifting columns supporting the machine frame from the ground engaging supports, and first and second side plates on opposing sides of the milling roller, the side plates being height-adjustable with respect to the machine frame, the method comprising:

receiving position sensing signals from first and second position sensors spaced apart in a traveling direction on one or more of the side plates; and

measuring a displacement of the one or more of the side plates with respect to the machine frame, based on the received position sensing signals.

Except as so admitted, Caterpillar denies the remaining allegations of paragraph 392.

393. Admitted.

394. Admitted.

395. Caterpillar denies the allegations of paragraph 395.

396. Caterpillar denies the allegations of paragraph 396.

397. Caterpillar denies the allegations of paragraph 397.

398. Caterpillar lacks sufficient knowledge and information to admit or deny the allegations of paragraph 398 and therefore denies them.

399. Caterpillar denies the allegations of paragraph 399.

400. Caterpillar denies the allegations of paragraph 400.

401. Caterpillar denies the allegations of paragraph 401.

#### **PRAYER FOR RELIEF**

Caterpillar denies any factual assertions contained in Wirtgen America's Prayer for Relief and further denies that Wirtgen America is entitled to the relief it seeks or any other relief.

## **DEFENSES**

In addition to denying infringement as to each of Wirtgen America's Asserted Patents, and subject to the responses above, Caterpillar alleges and asserts the following defenses in response to the allegations in Wirtgen America's Amended Complaint, undertaking the burden of proof only as to those defenses deemed affirmative defenses by law, regardless of how such defenses are denominated herein.

### **FIRST DEFENSE** **(Invalidity of Wirtgen America's Asserted Patents)**

The claims of Wirtgen America's Asserted Patents are invalid for failure to meet the conditions of patentability and/or requirements set forth in one or more of 35 U.S.C. § 101 *et seq.*, including without limitation §§ 101, 102, 103, and 112, or under any judicially created doctrines of invalidity.

### **SECOND DEFENSE** **(Disclaimer/Prosecution History Estoppel)**

Wirtgen America is barred, based on statements, representations, and admissions made during the prosecution of the patent applications resulting in Wirtgen America's Asserted Patents or related patent applications, from asserting any interpretation of any valid, enforceable claims of Wirtgen America's Asserted Patents that would be broad enough to cover any accused product alleged to infringe Wirtgen America's Asserted Patents, either literally or by application of the doctrine of equivalents.

### **THIRD DEFENSE** **(Prosecution Laches)**

One or more of Wirtgen America's Asserted Patents is unenforceable under the doctrine of prosecution laches. Wirtgen America's Asserted Patents issued after an unreasonable and unexplained delay in prosecution, and that delay in prosecution prejudiced Caterpillar, including,

for example, through evidentiary and economic prejudice. Caterpillar incorporates by reference its allegations in Paragraphs 36-41 of Caterpillar's Counterclaims.

**FOURTH DEFENSE**  
**(Intervening Rights)**

Wirtgen America's claims regarding the '268 patent are barred or limited by the doctrine of absolute and equitable intervening rights.

**FIFTH DEFENSE**  
**(Limitation on Damages)**

Wirtgen America's claim for damages, if any, against Caterpillar is limited by 35 U.S.C. §§ 286 and 287.

**SIXTH DEFENSE**  
**(Other Equitable Defenses – Estoppel, Waiver, Acquiescence, and Unclean Hands)**

Wirtgen America's claims are barred by one or more of the doctrines of estoppel, waiver, acquiescence, and unclean hands from enforcing, or claiming damages with respect to any claim of Wirtgen America's Asserted Patents.

**RESERVATION OF RIGHTS**

Caterpillar reserves the right to amend this Answer to Wirtgen America's Amended Complaint and assert further affirmative defenses in the event that discovery indicates that such would be appropriate.

**CATERPILLAR'S COUNTERCLAIMS**

Counterclaim-Plaintiff Caterpillar hereby alleges the following Counterclaims against Counterclaim-Defendant Wirtgen America:

**NATURE OF THE ACTION**

1. This is an action for declaratory relief under the Declaratory Judgment Act, 28 U.S.C. §§ 2201 and 2202, and the patent laws of the United States, 35 U.S.C. §§ 101 et seq.

**PARTIES**

2. Caterpillar is a Delaware corporation with its principal place of business at 510 Lake Cook Road, Suite 100, Deerfield, Illinois 60015.

3. Upon information and belief, Wirtgen America is a Tennessee corporation with its principal place of business at 6030 Dana Way, Antioch, Tennessee 37013-3116.

**JURISDICTION AND VENUE**

4. This action arises under the patent laws of the United States and the Declaratory Judgment Act. This Court has subject matter jurisdiction pursuant to 28 U.S.C. §§ 1331, 1338, 2201 and 2202.

5. This Court has personal jurisdiction over Wirtgen America because it consented to personal jurisdiction by filing its claims for patent infringement in this Court, in response to which these counterclaims are asserted.

6. Venue is proper in this judicial district for Wirtgen America pursuant to Wirtgen America's choice of forum for its patent claims and 28 U.S.C. §§ 1391(b)-(c). To the extent that 35 U.S.C. § 1400(b) applies, venue is proper for Wirtgen America because it has a regular and established place of business and has committed acts of infringement in this judicial district. Upon information and belief, Wirtgen America has a regular and established place of business through at least its dealership located at 38420 Sussex Highway, Delmar, Delaware, 19940. Upon information and belief, Wirtgen America has committed acts of infringement in this judicial district.

**COUNTERCLAIM 1**  
**(Infringement of U.S. Patent No. 7,523,995)**

7. Caterpillar hereby re-alleges and incorporates by reference the allegations in paragraphs 1-6 of these Counterclaims as if fully set forth herein.

8. Caterpillar is the sole and exclusive owner, by assignment, of all rights, title, and interest in U.S. Patent No. 7,523,995 (the “‘995 patent”), entitled “Milling Machine.” The ‘995 patent was duly and legally issued by the U.S. Patent and Trademark Office on April 28, 2009. The named inventors of the ‘995 patent are Federico B. Rio, Dean R. Potts, Gregory H. Dubay, and Dario Sansone. A copy of the ‘995 patent is attached as Exhibit 1.

9. The ‘995 patent generally relates to work machines for the treatment of roadway surfaces, and more particularly to a road planer or milling machine. *See* ‘995 patent at 1:5-7. “Road mills, sometimes called cold planers or scarifiers, are work machines that typically include a frame quadrilaterally supported by tracked or wheeled support units.” *Id.* at 1:11-13. The support units “generally include lift columns mounted between the frame and the tracks or wheels.” *Id.* at 1:18-19. At least “one of the support units, typically a rear unit, is commonly constructed in a manner permitting it to swing or pivot between two different operating positions: a projecting position in which the track or wheel is positioned substantially outside of the boundaries of the machine frame for maximum stability, and a retracted position in which the track or wheel is positioned substantially within the boundaries of the machine frame to enable the machine to mill road surfaces close to a curb or wall, for example.” *Id.* at 1:22-31. “To move the pivotable support unit from one position to the other position, an operator uses the lift column to lower the frame with respect to the support unit until the milling drum (or another frame mounted component) rests on the ground. Continued operation of the lift column raises the track or wheel off the ground so that the support unit can be pivoted.” *Id.* at 1:35-41. However, “repositioning the support unit in this manner [] causes the track or wheel to reverse its direction of rotation or running direction.” *Id.* at 1:41-44.

10. The '995 patent discloses and claims an inventive solution that overcomes this particular problem in road milling machines. For example, the '995 patent teaches the use of "rotation sensors and actuators" with a "programmed controller [] to rotate and steer each wheel or track section either independently or in coordination with each other, both when the one wheel or track segment [] is in the retracted position and when it is in the projecting position." *See id.* at 9:37-41; *see also id.* at claims 18, 20, 21. "The controller [] combined with the described apparatus accomplishes the transition of the one ground engaging unit [] between the operating positions in a flexible controlled manner while maintain the rotational or running direction, avoids bulky mechanical devices and linkages, and also selectively provides Ackerman correct steering capability." *Id.* at 9:45-51.

11. Wirtgen America has infringed and continues to directly infringe one or more claims of the '995 patent by making, using, selling, offering for sale, and/or importing into the United States without authority or license, the Accused Products<sup>3</sup> in violation of 35 U.S.C. §271(a).

12. Wirtgen America has induced and continues to induce infringement of one or more claims of the '995 patent by encouraging customers to use the Accused Products in a manner that directly infringes those claims. Despite its knowledge of the existence of the '995 patent, since at least the filing of this Counterclaim, Wirtgen America, upon information and belief, continues to encourage, instruct, enable, and otherwise cause its customers to use the Accused Products in a manner that infringes one or more claims of the '995 patent. Upon information and belief, Wirtgen America specifically intends that its customers use the Accused Products in a manner that infringes one or more claims of the '995 patent by, at a minimum, providing instructions and/or support

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<sup>3</sup> Accused Products, as used in Counterclaim 1, are defined more fully in Exhibit 2.

documentation directing customers on how to use the Accused Products in an infringing manner, in violation of 35 U.S.C. § 271(b).

13. Wirtgen America has contributed and continues to contribute to the infringement of one or more claims of the '995 patent. Upon information and belief, Wirtgen America knows that the Accused Products are especially made and/or adapted for users to infringe one or more claims of the '995 patent and are not staple articles or commodities of commerce suitable for substantial non-infringing use. Wirtgen America's sales of the Accused Products constitute contributory infringement in violation of 35 U.S.C. § 271(c).

14. Attached as Exhibit 2 is a claim chart that provides examples of Wirtgen America's infringement of claim(s) of the '995 patent in violation of 35 U.S.C. §§ 271(a), (b), and (c).

15. By no later than the filing of this Counterclaim, Wirtgen America became aware of the existence of the '995 patent and at least some of Wirtgen America's and/or others' activities that infringe at least one or more claims of the '995 patent. Based on disclosures made no later than the filing of this Counterclaim, Wirtgen America has knowledge of the '995 patent and its activities alleged to be infringing, inducing infringement of, or contributing to the infringement of the '995 patent.

16. Caterpillar is entitled to recover from Wirtgen America the damages sustained as a result of Wirtgen America's infringement of one or more claims of the '995 patent in an amount not yet determined. Wirtgen America's infringement of one or more claims of the '995 patent will continue to damage Caterpillar, causing irreparable harm for which there is no adequate remedy at law, unless enjoined by this Court.

**COUNTERCLAIM 2**  
**(Infringement of U.S. Patent No. 9,975,538)**

17. Caterpillar hereby re-alleges and incorporates by reference the allegations in paragraphs 1-16 of these Counterclaims as if fully set forth herein.

18. Caterpillar is the sole and exclusive owner, by assignment, of all rights, title, and interest in U.S. Patent No. 9,975,538 (the “’538 patent”), entitled “Milling Machine Fuel Efficiency Control System.” The ’538 patent was duly and legally issued by the U.S. Patent and Trademark Office on May 22, 2018. The named inventor of the ’538 patent is James A. Aardema. A copy of the ’538 patent is attached as Exhibit 3.

19. The ’538 patent generally relates to milling machines, and more particularly, to methods and systems for controlling the rotor speeds of cold planers and rotary mixers with optimized performance and fuel efficiency. *See* ’538 patent at 1:6-9. “Industrial machines, such as cold planers, pavement profilers, road milling machines, roadway planers, rotary mixers, and the like, are machines designed for scarifying, removing, mixing or reclaiming material from the surface of bituminous or concrete roadways and similar surfaces.” *Id.* at 1:13-17. Prior to the ’538 patent, prior art systems suffered significant drawbacks, especially with respect to fuel efficiency, “which is [a] concern that can be adversely affected by variations in engine speed and engine load.” *Id.* at 1:38-40. Thus, there was a “need for improved solutions for controlling and maintaining a desired rotor speed of a milling machine, which also [took] fuel consumption or efficiency into consideration.” *Id.* at 1:41-44.

20. The ’538 patent discloses and claims an inventive solution that overcomes this particular problem in industrial machines. Specifically, the invention disclosed in the ’538 patent provides methods and systems aimed at “receiving a desired rotor speed, determining an engine load of the engine, adjusting an engine speed of the engine based on the engine load and one or

more predefined efficiency points, and adjusting a gear ratio of the variable transmission based on the engine speed and the desired rotor speed.” *Id.* at 1:55-60; *see id.* at claims 1, 6.

21. Wirtgen America has infringed and continues to directly infringe one or more claims of the ’538 patent by making, using, selling, offering for sale, and/or importing into the United States without authority or license, the Accused Products<sup>4</sup> in violation of 35 U.S.C. §271(a).

22. Wirtgen America has induced and continues to induce infringement of one or more claims of the ’538 patent by encouraging customers to use the Accused Products in a manner that directly infringes those claims. Despite its knowledge of the existence of the ’538 patent, since at least the filing of this Counterclaim, Wirtgen America, upon information and belief, continues to encourage, instruct, enable, and otherwise cause its customers to use the Accused Products in a manner that infringes one or more claims of the ’538 patent. Upon information and belief, Wirtgen America specifically intends that its customers use the Accused Products in a manner that infringes one or more claims of the ’538 patent by, at a minimum, providing instructions and/or support documentation directing customers on how to use the Accused Products in an infringing manner, in violation of 35 U.S.C. § 271(b).

23. Wirtgen America has contributed and continues to contribute to the infringement of one or more claims of the ’538 patent. Upon information and belief, Wirtgen America knows that the Accused Products are especially made and/or adapted for users to infringe one or more claims of the ’538 patent and are not staple articles or commodities of commerce suitable for substantial non-infringing use. Wirtgen America’s sales of the Accused Products constitute contributory infringement in violation of 35 U.S.C. § 271(c).

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<sup>4</sup> Accused Products, as used in Counterclaim 2, are defined more fully in Exhibit 4.

24. Attached as Exhibit 4 is a claim chart that provides examples of Wirtgen America's infringement of claim(s) of the '538 patent in violation of 35 U.S.C. §§ 271(a), (b), and (c).

25. By no later than the filing of this Counterclaim, Wirtgen America became aware of the existence of the '538 patent and at least some of Wirtgen America's and/or others' activities that infringe at least one or more claims of the '538 patent. Based on disclosures made no later than the filing of this Counterclaim, Wirtgen America has knowledge of the '538 patent and its activities alleged to be infringing, inducing infringement of, or contributing to the infringement of the '538 patent.

26. Caterpillar is entitled to recover from Wirtgen America the damages sustained as a result of Wirtgen America's infringement of one or more claims of the '538 patent in an amount not yet determined. Wirtgen America's infringement of one or more claims of the '538 patent will continue to damage Caterpillar, causing irreparable harm for which there is no adequate remedy at law, unless enjoined by this Court.

**COUNTERCLAIM 3**  
**(Infringement of U.S. Patent No. 9,371,618)**

27. Caterpillar hereby re-alleges and incorporates by reference the allegations in paragraphs 1-26 of these Counterclaims as if fully set forth herein.

28. Caterpillar is the sole and exclusive owner, by assignment, of all rights, title, and interest in U.S. Patent No. 9,371,618 (the “‘618 patent” and collectively, with the '995 and '538 patents, “Caterpillar’s Asserted Patents”), entitled “Cold Planer Spray System and Method.” The '618 patent was duly and legally issued by the U.S. Patent and Trademark Office on June 21, 2016. The named inventors of the '618 patent are Daniel H. Killion and Eric S. Engelmann. A copy of the '618 patent is attached as Exhibit 5.

29. The '618 patent generally "relates to fluid controls for machines and, more specifically, to a water spray system for a cold planer. *See* '618 patent at 3:38-40. Many cold planers "use an up-cut configuration, in which the drum rotates in the reverse direction to the drive wheel or tracks, which helps drive the milled material up and into a conveyor." *Id.* at 1:32-35. This configuration, however, "creates considerable amounts of dust and other airborne debris, which can be controlled by various methods including water spraying and using vacuum collectors." *Id.* at 1:35-38. Although a "typical cold planer will carry a water reservoir onboard that feeds the water sprays," some "cold planers may operate in remote areas where water is not readily accessible and must be delivered by truck." *Id.* at 1:41-43. Further, "[w]ater replenishment [] requires the machine to stop operation and thus increase the time required to complete a project." *Id.* at 1:43-45. The '618 patent described an improved cold planer which uses water more efficiently.

30. Wirtgen America has infringed and continues to directly infringe one or more claims of the '618 patent by making, using, selling, offering for sale, and/or importing into the United States without authority or license at least the Wirtgen W210 Fi in violation of 35 U.S.C. §271(a).

31. Wirtgen America has induced and continues to induce infringement of one or more claims of the '618 patent by encouraging customers and end-users to use the Accused Products<sup>5</sup> in a manner that directly infringes those claims. Despite its knowledge of the existence of the '618 patent, since at least the filing of this Counterclaim, Wirtgen America, upon information and belief, continues to encourage, instruct, enable, and otherwise cause its customers to use the Accused Products in a manner that infringes one or more claims of the '618 patent. Upon information and

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<sup>5</sup> Accused Products, as used in Counterclaim 3, are defined more fully in Exhibit 6.

belief, Wirtgen America specifically intends that its customers use the Accused Products in a manner that infringes one or more claims of the '618 patent by, at a minimum, providing instructions and/or support documentation directing customers and end-users on how to use the Accused Products in an infringing manner, in violation of 35 U.S.C. § 271(b).

32. Wirtgen America has contributed and continues to contribute to the infringement of one or more claims of the '618 patent. Upon information and belief, Wirtgen America knows that the Accused Products are especially made and/or adapted for users to infringe one or more claims of the '618 patent and are not staple articles or commodities of commerce suitable for substantial non-infringing use. Wirtgen America's sales of the accused products constitutes contributory infringement in violation of 35 U.S.C. § 271(c).

33. Attached as Exhibit 6 is a claim chart that provides examples of Wirtgen America's infringement of claim(s) of the '618 patent in violation of 35 U.S.C. §§ 271(a), (b), and (c).

34. By no later than the filing of this Counterclaim, Wirtgen America became aware of the existence of the '618 patent and at least some of Wirtgen America's and/or others' activities that infringe at least one or more claims of the '618 patent. Based on disclosures made no later than the filing of this Counterclaim, Wirtgen America has knowledge of the '618 patent and its activities alleged to be infringing, inducing infringement of, or contributing to the infringement of the '618 patent.

35. Caterpillar is entitled to recover from Wirtgen America the damages sustained as a result of Wirtgen America's infringement of one or more claims of the '618 patent in an amount not yet determined. Wirtgen America's infringement of one or more claims of the '618 patent will continue to damage Caterpillar, causing irreparable harm for which there is no adequate remedy at law, unless enjoined by this Court.

**COUNTERCLAIM 4**  
**(Prosecution Laches)**

36. Caterpillar hereby re-alleges and incorporates by reference the allegations in paragraphs 1-35 of these Counterclaims as if fully set forth herein.

37. Wirtgen America is barred by the doctrine of prosecution history laches from enforcing at least the '871, '530, '474, '268, '390 and '391 patents against Caterpillar by its unreasonable and unexplained delay in their prosecution which has caused economic and evidentiary prejudice to Caterpillar.

38. Upon information and belief, the unreasonable delay in prosecuting the '871, '530, '474, '268, '390 and '391 patents began at least when the applications for the patents were filed and demonstrates a systematic strategy of delayed prosecution.

39. For example, the '268 patent is a reissue of U.S. Patent Application No. 12/985,400, which was filed on January 6, 2011, and issued as U.S. Patent No. 8,408,659 (the “'659 patent”) on April 2, 2013. The application for the '268 patent was filed on March 23, 2018, five years after the issuance of the '659 patent and almost thirteen years after the earliest filed application to which it claims priority, which was filed on April 15, 2005.

40. An actual and justiciable controversy has thus arisen between Wirtgen America and Caterpillar concerning the enforceability of the '871, '530, '474, '268, '390 and '391 patents.

41. Pursuant to 28 U.S.C. § 2201 *et seq.*, Caterpillar is entitled to a judgment that at least the '871, '530, '474, '268, '390 and '391 patents are unenforceable for prosecution laches.

**DEMAND FOR A JURY TRIAL**

Caterpillar demands a jury trial on all issues so triable.

**PRAYER FOR RELIEF**

WHEREFORE, Caterpillar prays that the Court enter judgment in its favor and against Wirtgen America as follows:

- A. Dismissal, with prejudice, of Wirtgen America's claims against Caterpillar;
- B. Denial of all relief that Wirtgen America seeks in its Amended Complaint;
- C. Judgment that Wirtgen America has infringed one or more claims of each of Caterpillar's Asserted Patents;
- D. Judgment that Wirtgen America has induced others to infringe one or more claims of each of Caterpillar's Asserted Patents;
- E. Judgment that Wirtgen America has contributed to infringement by others of one or more claims of each of Caterpillar's Asserted Patents;
- F. An award of damages adequate to compensate Caterpillar for the infringement that has occurred, pursuant to 35 U.S.C. § 284, including pre-judgment and post-judgment interest;
- G. Judgment that the '871, '530, '474, '268, '390 and '391 patents are unenforceable;
- H. An order enjoining Wirtgen America and all of its subsidiaries, affiliates, officers, agents, servants, employees, attorneys, and their heirs, successors and assigns, and all persons acting in concert or participation with it and each of them, be immediately enjoined and restrained, preliminarily and permanently, without bond, from manufacturing, distributing, selling or offering for sale in the United States or

importing into the United States products infringing the claims of Caterpillar's Asserted Patents;

- I. An order finding this case to be exceptional under 35 U.S.C. § 285 and awarding Caterpillar its costs and attorneys' fees; and
- J. Awarding any other relief that Court deems just and proper.

Respectfully submitted,  
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*Attorneys for Defendant Caterpillar Inc.*

Dated: October 14, 2021  
7433826/44413